

IN THE U.S. PATENT AND TRADEMARK OFFICE

Application No.: 10/747,616	Confirmation No. 2874
Application of: RAJU et al.	Group Art Unit: 1794
Filing Date: Dec 30, 2003	Examiner: CHEN, Vivian
Title: Oxygen Barrier Material For Packaging	Docket No. C261 1040.1
	Customer No. 26158

DECLARATION OF DR. K.V.S.N RAJU UNDER 37 CFR 1.132

Commissioner for Patents
USPTO
Alexandria, VA 22313-1450

Dear Sir or Madam:

I, Kothapalli Venkata Raju, hereby declare that:

1. I am a co-inventor of the above-identified application and hold a PhD in Chemistry.
2. I have 32 years' experience in the field of organic coatings, including adhesives, nanocoatings, sol-gel coatings, dendrimers, water-based coatings and the like.
3. My current position is Scientist, Organic Coatings & Polymer Division, Indian Institute of Chemical Technology, Hyderabad, India.
4. I have reviewed the office action mailed 18-February-2010, the claims rejected therein, and the references cited by the Examiner. These references include Wu

(USP 3,997,694), Wu (USP 3,943,187), Shanton (USP 5,776,619), WO 99/23179 and Christenson et al (USP 4,335,829).

5. The present invention is directed to a food-grade packaging coating material capable of serving as an oxygen barrier when applied to a packaging substrate. In my opinion, none of the cited references discloses a packaging material having such a capability.

6. The Wu references are directed to a ductile, formable coating for aluminum and steel cans. The coating contains epoxy resin and well as an acrylic polymer. These references make no mention of the suitability of this resulting material as a food grade packaging coating capable of providing an oxygen barrier.

7. The Shanton reference is directed to an improved paperboard or plate stock useful for food containers such as plates, bowls, trays etc. Shanton mentions the use of food grade pigments for coloration, and even mentions that calcined clay is one such pigment. However, Shanton makes no mention of the oxygen barrier property of using calcined clay in combination with an alkyd or epoxy resin, TiO₂, and Talc.

8. The WO 99/23179 reference is directed to a coating composition for paperboard, and employs latex and various colorants and also extenders/fillers like calcined kaolin, precipitated silicas, synthetic and precipitated calcium carbonate, calcined clay, etc. These materials are used as fillers/extendere to reduce cost, and WO 99/23179 does not appreciate the oxygen barrier property of using calcined clay in combination with an alkyd or epoxy resin, TiO₂, and Talc.

9. At the time the present application was filed, Nilset 117 was a known anti-settling agent used in coatings. Attachment A is a 2001 article, entitled "Optimization of product performance of a paint formulation using a mixture experiment", J. App. Stat. v. 28, n. 2, pp. 199-213 (2001). On page 199, Nilset 117 is mentioned as being an anti-settling agent.

10. Borchl Gol E2 is a known flow-promoter and de-aerating agent, as indicated in Attachment B, which is a data sheet taken from borchers.com, dated 25-Feb-2005.

11. At the time the present application was filed, Borchol E2 was a known compound. Attachment C, which comprises a German-language safety data sheet for Borchol E2, dated 10-Sep-2002, along with its English translation, shows that Borchol E2 was known over a year before the filing date of the present application.

12. The original application had a typographical error in that "Hapco NXZ" was included in the specification and claims, rather than "Nopco NXZ". It is my opinion that one skilled in the art of organic coatings, upon reading the present specification, and especially the examples therein, would understand that "Nopco NXZ" was meant, and not "Hapco NXZ".

13. Nopco NXZ is a well known anti-foaming agent. Attachment D contains a list of US patents issued in the years 1995 – 2002, which mention Nopco NXZ. U.S. Patent No. 5,846,125 is just one of many patents that not only mention Nopco NXZ, but also specify that it is an anti-foaming agent.

14. I further declare that all statements made herein of my own knowledge are true and all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United Code, and that such willful false statements may jeopardize the validity of this application or any patent issuing thereon.

Respectfully Submitted,

Date: 18/06/2010



K. V. S. N. Raju

Dr K V S N RAJU
SCIENTIST
Indian Institute of Chemical Technology
HYDERABAD-500 007